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REMARKS

Claims 1-26 are pending in the present Application. Claims 1 and 23-26 have been amended. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-23 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,302,774 to Berg (Berg) in view of U.S. Patent No. 4,400,555 to Mendiratta (Mendiratta), U.S. Patent No. 4,822,923 to Li (Li), and U.S. Patent No. 4,859,803 to Shaw (Shaw).

Claims 24 and 25 are rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Berg, JP 57-31629, JP 10-21257 and JP 10-251180.

Claim 26 is rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Berg, JP 57-31629, JP 10-21257 or JP 10-251180.

Applicants respectfully traverse these rejections.

Berg is directed to a process for the production of bisphenols from acetone and phenols using a sulfonic acid ion exchange modified with alkyl-SH groups. Berg teaches that the addition of water to the reaction can improve selectivity. (Col. 1, lines 52-55) At Col. 2, lines 15 to 18, Berg discloses that the inclusion of water extends the life of the ion exchange resins which are used as a catalyst in the reaction. Furthermore Berg teaches that the amount of water added to the educt mixture before the start of the reaction is 0.6 to 5% by weight. (Col. 2, lines 67-68).

In Example 2, Berg runs to parallel experiments employing differing amounts of water (1% and 2%) but the amount of water in the feed is constant and does not vary over time. Berg notes that 2% of water increases the selectivity of the reaction. One of ordinary skill in the art, upon reading Berg, would employ 2% of water since that yielded the best selectivity with only a "marginal reduction" in conversion. Berg employs different water levels in the reaction to determine the best overall water level but at no point does Berg teach or suggest modifying the water content based on the *para-para* bisphenol selectivity of the reaction as is instantly claimed. Berg, in fact, comments on

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the "uniform activity" (Col. 2, line 25) of the catalyst which further leads one of ordinary skill in the art to understand that a single water content is to be employed.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Applicants respectfully assert that Berg does not teach or disclose altering the water content of a reaction over the course of the reaction. Applicants further assert that there is no suggestion in Berg to alter the water content in the reaction over time and in particular, there is no motivation to alter the water content based on the *para-para* bisphenol selectivity of the reaction. Berg merely teaches that water addition in the educt mixture before the reaction is desirable and that 2% appears to be the most advantageous amount of water.

Mendiratta does not rectify the deficiencies of Berg because Mendiratta does not teach or suggest adding water to the reaction feed. Mendiratta discloses using substantially anhydrous feedstocks and that the by-product condensation reaction water content of the reaction is less than 2%. (Col. 3, lines 42-49) Because Mendiratta does not disclose adding water to the feedstock, Mendiratta cannot teach modifying the amount of water in the feed based on the *para-para* bisphenol selectivity.

Li discloses isomerizing the by-products of bisphenol synthesis in the presence of an acid catalyst and a mercaptan co-catalyst. Li does not disclose using water during the bisphenol synthesis. In fact, Li states that solvents or diluents are not necessary. (Col. 2, lines 39-41) Li does teach that water is present during the isomerization step but teaches the use of a single amount and does not teach or suggest varying the amount of water added to the feed based on the *para-para* bisphenol selectivity.

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Shaw discloses injecting mercaptan over the course of the reaction. Shaw discloses that water may be part of the reaction feed in an amount up to 1%. (Col. 3, lines 31-33). Shaw discloses use of a single level of water throughout the course of the reaction and does not teach or suggest modifying the amount of water added to the feed during a reaction based on the *para-para* bisphenol selectivity.

The abstract of JP 57-031629 discloses the production of bisphenol ethanes using 5 to 200 parts of water per 100 parts of starting materials. JP 57-031629 does not teach or suggest modifying the amount of water over the course of the reaction.

Similarly, the abstract of JP 10-251180 teaches the inclusion of water in the reaction feed but in an amount of 0.05 to 0.5 wt%. JP 10-251180 does not teach or suggest changing the amount of water in the feed over the course of the reaction.

JP 10-212257 discloses adding 0.05 to 0.5 wt% of water to the starting materials and reducing the amount of water in the feed over time. JP 10-212257 does not teach or suggest modifying the amount of water added to the feed during a reaction based on the *para-para* bisphenol selectivity.

Applicants respectfully assert that none of the references teach or suggest modifying the amount of water in the feed based on *para-para* bisphenol selectivity. As a result Applicants believe that a *prima facie* case of obviousness has not been established and the pending claims are non-obvious.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

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If there are any additional charges with respect to this Amendment or otherwise,
please charge them to Deposit Account No. 07-0893.

Respectfully submitted,

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